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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,907	06/09/2006	Takao Yashiro	4676-964	1501
23117 7590 03/24/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
WALKE, AMANDA C				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
03/24/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,907

Applicant(s)

YASHIRO ET AL

Examiner

Amanda C. Walke

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1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamura et al (EP 938026).

Yamamura et al disclose a photocurable composition comprising:

- (A) a cationically polymerizable organic compound;[0025]
 - (B) a cationic photopolymerization initiator;
 - (C) an ethylenically unsaturated monomer;
 - (D) a radical photopolymerization initiator; and
 - (E) a polyol
 - (F) elastomeric particles having a diameter of 10-700nm.
- In amounts of :

20-85 wt% component (A), 0.1-10 wt% component (B), 5-45 wt% component (C), 0.1-8 wt% component (D), and 5-35 wt% component (E).

The reference teaches that component C may be either a mono or poly functional monomer having a molecular weight of 110-2,000 ([0038]-[0047]). Among polyfunctional monomers listed are:

ethylene glycol di(meth)acrylate, dicyclopentenyl di(meth)acrylate, triethylene glycol diacrylate, tetraethylene glycol di(meth)acrylate, tricyclodecanediyl dimethylene di(meth)acrylate, tris(2-hydroxyethyl)isocyanurate di(meth)acrylate, tris(2-hydroxyethyl)isocyanurate tri(meth)acrylate, caprolactone-modified tris(2-hydroxyethyl)isocyanurate tri(meth)acrylate, pentaerythritol

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tri(meth)acrylate, pentaerythritol tetra(meth)acrylate, polyester di(meth)acrylate, poly\)-ethylene glycol di(meth)acrylate, dipentaerythritol hexa(meth)acrylate, dipentaerythritol penta(meth)acrylate, dipentaerythritol tetra(meth)acrylate, caprolactone-modified dipentaerythritol hexa(meth)acrylate, caprolactone-modified dipentaerythritol penta(meth)acrylate, ditrimethylolpropane tetra(meth)acrylate, EO-modified bisphenol A di(meth)acrylate, PO-modified bisphenol A di(meth)acrylate, EO-modified hydrogenated bisphenol A di(meth)acrylate, PO-modified hydrogenated bisphenol A di(meth)acrylate, EO-modified bisphenol F di(meth)acrylate, (meth)acrylate of phenol novolak polyglycidyl ether, and the like.

The above monofunctional monomers and polyfunctional monomers can be used either individually or in combinations of two or more, or in combinations of at least one monofunctional monomer and at least one polyfunctional monomer as the component (C). It is preferable that the component (C) contain 60 wt% of polyfunctional monomers having three or more ethylenically unsaturated bonds in a molecule. The proportion of these polyfunctional monomers having three or more ethylenically unsaturated bonds used in the component (C) is more preferably 70 wt% or more, even more preferably 80 wt% or more, and most preferably 100 wt%. If the proportion of these polyfunctional monomers is less than 60 wt%, the resin composition may exhibit decreased photocurability and the resulting three-dimensional objects may exhibit deformation with time. Among the commercially available polyfunctional monomers listed are compounds meeting the instant claim limitations and listed as preferred embodiments of formula 1; M-215, M-315, and M-325 manufactured by Toagosei Co. Ltd. ([0044]).

Given that the reference teaches that two or more polyfunctional monomers may be employed and the reference lists a few isocyanurate compounds by name and by product name, it would have been obvious to one of ordinary skill in the art to prepare the material of the reference choosing to employ one preferred compound in [0046] and one isocyanurate as a comonomer employ each in an amount meeting the instant claim limitations (45wt% of the total composition, and preferably 100% of C is made up of the polyfunctional monomers, and a combination of two would be 22.5 % of each, meeting the limitations for A and C of the instant claims([0045]-[0047])).

The reference teaches and claims a process meeting the instant claim limitations.

Regarding claim 11, this claim is a product by process claim. The resultant product of the reference is a three dimensional pattern/ object and would thus meet the claim limitations. From the MPEP:

M.P.E.P. § 2113:

"Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985)... "The Patent Office bears a lesser burden proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessman, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 218 USPQ 289, 292 (Fed. Cir. 1983).

Response to Arguments

3. Applicant's arguments filed 12/14/2007 have been fully considered but they are not persuasive. Applicant has simply argued that the Yamamura et al reference fails to meet the

instant claims limitations as the material has inferior mechanical properties. The examiner notes that the reference clearly teaches a composition comprising the instantly claimed components, and has not argued that it does not. No evidence has been provided demonstrating that the material comprising the instantly claimed components is inferior to the inventive material, therefore the rejection is maintained. In light of applicants amendments the claim objection and 12 rejections have been withdrawn.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda C. Walke whose telephone number is 571-272-1337. The examiner can normally be reached on M-R 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amanda C Walke
Primary Examiner
Art Unit 1795

/Amanda C Walke/
Primary Examiner, Art Unit 1795